"Would you like RED or WHITE wine? - I would like red WINE"

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NATIVE SPEAKER PERCEPTION OF (NON-)NATIVE INTONATION PATTERNS

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Introduction

GOAL OF OUR STUDY

To assess whether prosodic transfer effects found in L2 production, also affect intelligibility and naturalness in perception by L1 speakers.

FOCUS AND INTONATION IN L1 DUTCH & SPANISH

Dutch	New or contrasting information is generally ACCENTED and given information is deaccented (Rasier, 2006; Swerts et al., 2002).
	Ex. De rode bezem en de [GROENE]$_F$ bezem 'The red broom and the GREEN broom'
Spanish	The ACCENT is usually placed at the end of the intonational phrase, irrespective of information status (Face, 2002; Hualde, 2005).
	Ex. El globo verde y el [guante]$_F$ VERDE 'The balloon green and the glove GREEN'

RESEARCH QUESTIONS

RQ1 Does speech by Spanish learners of Dutch show intonational transfer effects from the L1, and do these diminish as the proficiency level of the learner increases?

→ **YES**, see Van Maastricht, Krahmer & Swerts (2014)

RQ2 Since L2 speakers make less adequate use of pitch accent distribu- tions than L1 speakers do, do Dutch natives also have more difficulty processing the speech of Spanish learners of Dutch than the speech of Dutch L1 speakers?

RQ3 If so, does the proficiency level of the L2 speakers influence the perception process, as is the case in the production of pitch accents?

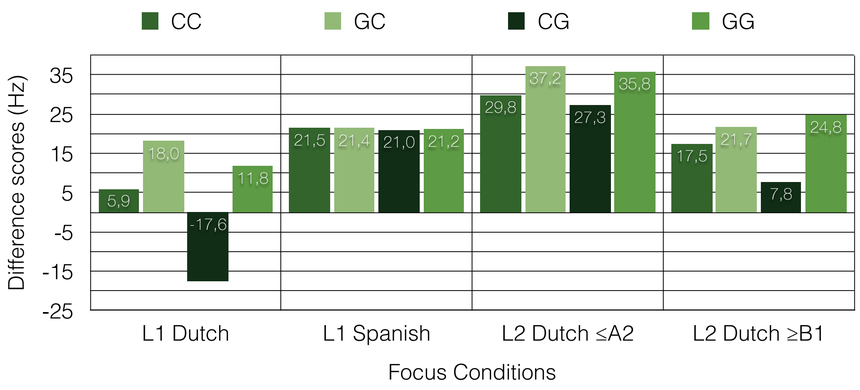
Production[1] - A quick recap

PARTICIPANTS (N=84): 26 L1 Dutch, 19 L1 Spanish, 19 Less proficient L2 Dutch (≤A2), 20 Proficient L2 Dutch (≥B1)

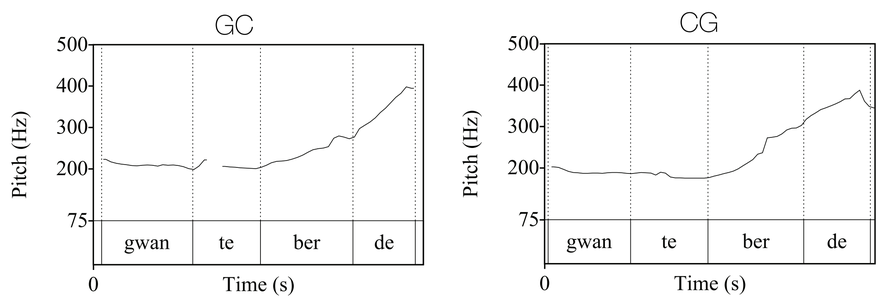
SPEECH ELICITATION TASK: 'Describe the objects and their color'

4 FOCUS CONDITIONS: Contrastive/Contrastive, Given/Contrastive, Contrastive/Given, Given/Given.

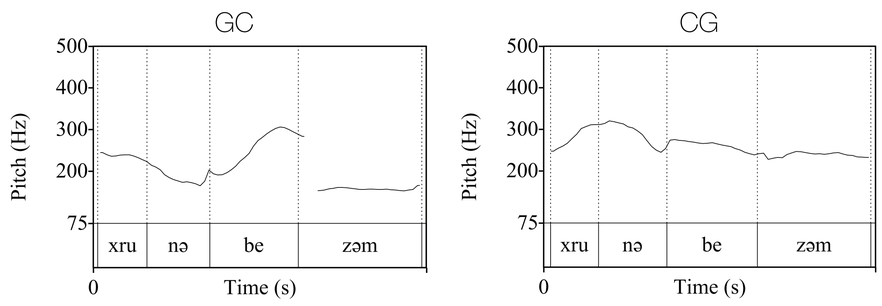
MEASURE: Difference score in Hertz (F_0 stressed syllable word 2 - F_0 stressed syllable word 1).



SPANISH = 'green GLOVE' in GC & CG



DUTCH = 'green BROOM' in GC & 'GREEN broom' in CG



[1] See Van Maastricht, Krahmer & Swerts (2014) for a more detailed discussion of this study.

Perception test I - Reaction Times

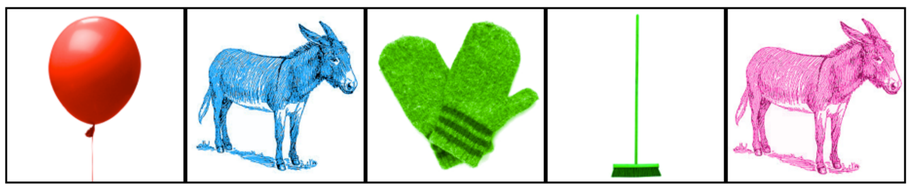
PARTICIPANTS (N=41): Dutch natives, who do not speak Spanish

REACTION TIMES TASK: 'Does the fourth utterance that you hear correspond to the fourth picture on the screen?'

2 FOCUS CONDITIONS: Focus on the noun or focus on the adjective.

MEASURE: Reaction time in ms., from the onset of the fourth utterance, and the appearance of the fourth picture.

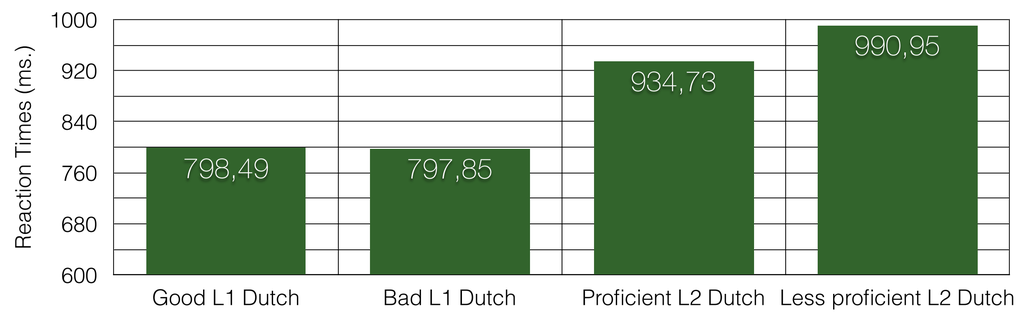
STIMULI:



4 SPEAKER CONDITIONS:

Speaker type	Correct accent placement?	Gender
L1 Dutch	✗	2 ♂ / 2 ♀
L1 Dutch	✓	2 ♂ / 2 ♀
Less proficient L2 Dutch (≤A2)	✗	2 ♂ / 2 ♀
Proficient L2 Dutch (≥B2)	✓	2 ♂ / 2 ♀

RESULTS:



$F(3,120)=850.21$, $p<0.001$

L2 speaker groups differ significantly from each other and both L1 groups at $p\leq0,001$

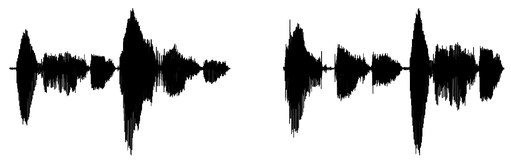
Perception test II - Preference task

PARTICIPANTS (N=24): Dutch natives, who do not speak Spanish

PREFERENCE TASK: 'Which of the following two utterances sounds the most natural to you?'

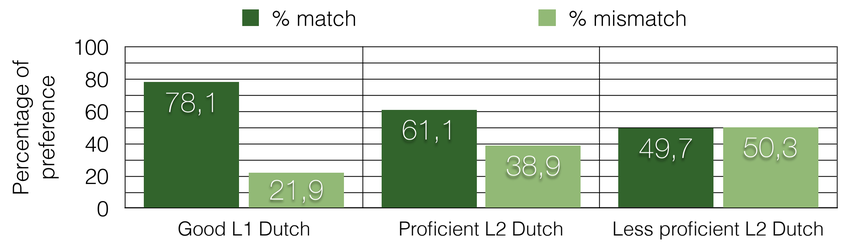
MEASURE: Preference score (=Sum of the amount of times the ppt preferred the prosodically correct utterance over the prosodically incorrect utterance).

STIMULI:



Utterance A: "de rode ezel de [BLAUWE]$_F$ ezel" (match)
Utterance B: "de rode ezel de [blauwe]$_F$ EZEL" (mismatch)

RESULTS:



$F(2,46)=30,55$, $p<0.001$

Speaker groups differ significantly from each other at $p\leq0,01$

Discussion & Conclusion

RQ2 Yes, it is more difficult for Dutch natives to process the speech of L2 Dutch spoken by Spanish natives, than it is to process L1 Dutch.

RQ3 Yes, similar to the transfer in the production of intonation, the proficiency level of the speaker influences the speed with which Dutch listeners perceive and process intonation.

HOWEVER, the design does not control for the effect of segmental deviances in the case of L2 speech.

When comparing the prosodically correct and incorrect L1 speech, no differences are found.

Does this mean that pitch accent distribution doesn't influence the perception by natives?

NO, because the preference task shows us that when controlling for segmental deviances, native listeners are sensitive to the perception of deviant pitch accent distributions and have preferences based on the naturalness of the prosodic pattern of an utterance.

FURTHER WORK will determine whether these "naturalness preferences" result in a difference in RT between less proficient and proficient L2 speakers, when segmental deviances are controlled for.

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